

Claims

1. A method for installing one or more control lines to the outside of a pipe string, comprising:

- attaching a control line to a first point at the outside of a length of pipe,
- 5 selecting a second attachment point on the length of pipe where the control line is to be attached to the outside of the length of pipe,
- lowering the length of pipe and attached control line through an opening in the floor of a rig until the first and second attachment points are below the floor,
- raising the length of pipe and attached control line from the floor opening until the
- 10 second attachment point is above the floor,
- attaching the control line to the outside of the length of pipe at the second attachment point,
- lowering the length of pipe and attached control line until the second attachment point is below the floor,
- 15 adding pipe to the length of pipe above the floor,
- selecting a third attachment point where the control line is to be attached to the outside of the length of pipe,
- lowering the length of pipe and attached control line through the floor opening until the third attachment point is below the floor,
- 20 raising the length of pipe and attached control line from the floor opening until the third attachment point is above the floor, and
- attaching the control line to the outside of the length of pipe at the third attachment point.

25 2. A system for securing a control line to the outside of a length of pipe, comprising:

- a pipe elevator for selectively raising and lowering the length of pipe through a rig floor opening,
- a pipe support assembly carried on the rig floor for selectively supporting the
- 30 length of pipe in the floor opening,

an access opening extending laterally between the pipe support assembly and the rig floor for receiving a control line,

a control line extending from above the floor, through the access opening and through the rig floor opening to the length of pipe below the rig floor,

5 a linking structure for selectively raising and lowering the pipe support assembly, and

a securing structure for securing the control line to the length of pipe at a point above the floor and below the pipe support assembly when the linking structure has raised the pipe support assembly above the floor.

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3. A system as defined in claim 2 wherein said linking structure comprises an elevator.

4. A system defined in claim 2 wherein said linking structure comprises a
15 cylinder/piston assembly.

5. A system as defined in claim 4 wherein said cylinder/piston assembly is carried by an elevator.

20 6. A system as defined in claim 4 wherein said cylinder/piston assembly is mounted on said floor.

7. An apparatus for attaching a control line to the outside of a length of pipe, comprising:

25 a pipe support assembly mountable on the floor of a rig over a floor opening for supporting a vertically extending length of pipe in the floor opening,

an access opening extending laterally alongside the pipe support assembly from a first point above the floor to the floor opening,

a control line guide connected with the pipe support assembly for guiding a control line from said first point above the floor through said access opening to a second point below the floor along a path that extends between the two points, and

a linking structure for raising the pipe support assembly and the control line guide
5 from its mounting on the rig floor.

8. An apparatus as defined in claim 7 wherein said linking structure comprises an elevator.

10 9. An apparatus as defined in claim 7 wherein said linking structure comprises a cylinder/piston assembly.

10. An apparatus as defined in claim 9 wherein said cylinder/piston assembly is carried by an elevator.

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11. An apparatus as defined in claim 9 wherein said cylinder/piston assembly is mounted on said floor.